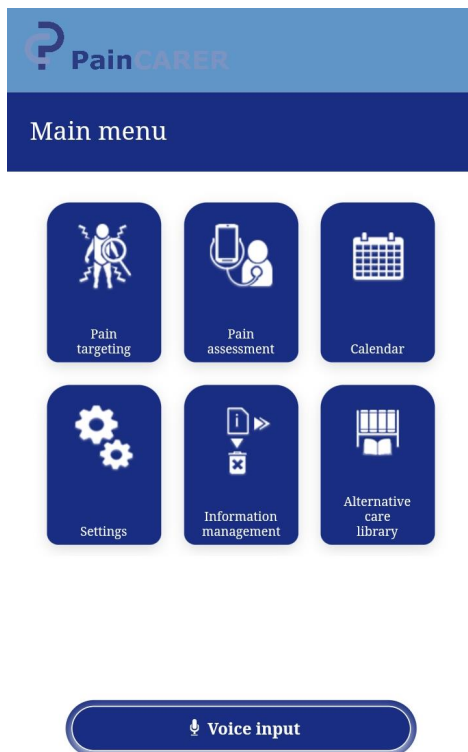


PainCARER

Mobile application for pain self-assessment





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1 Introduction

1.1 Use description

This user manual has been created for users of PainCARER mobile application. User manual guides user to download and install the software and instructs how application is used in pain self-assessment.

PainCARER is a mobile application for pain self-assessment. Application is a tool for patients suffering from pain to record and assess their pain events. Assessed pain records can be composed to report that can be shared with health care professionals.

PainCARER application is designed to be user friendly and easy to use tool for all users that are interested in following and assessing their pain.

1.2 Documents and accessibility

1.2.1 Internet

Latest document versions are procurable at PainCARER web page:
<http://www.paincarer.com>

1.2.2 Document order

Application related documents and user manual can be ordered by sending email to Kipuwex Oy: info@kipuwex.com

1.2.3 Document feedback

Feedback about the documents can be submitted at web page feedback form or by email to info@kipuwex.com.

We appreciate your feedback.

2 PainCAREER mobile application

2.1 Use of PainCAREER mobile app

PainCAREER is a mobile application designed for pain self-assessment that is used for recording, analyzing and keep track of user's pain events. With PainCAREER user can target the pain area, assess the pain level and type, and include important information about the pain symptoms. User can keep track of pain records and create reports that can be shared to health care professionals.

2.2 Process description

Install the PainCAREER application to your mobile device from Google Play or Apple App Store. Register to application and create a profile. Paint targeted pain area and possible swelling and numbness areas to model. Assess the pain level, state, type and write additional information about the pain symptoms. Pain data will be stored in mobile device memory and it can be observed in Calendar view of the app and managed in Information management view. Selected pain data can be composed to report that can be shared with health care professionals.

3 PainCARER User interface

3.1 Login view

- Start view appears to the screen when app is started
- Start view disappears in few seconds revealing login/registration view. (If user has already registered and login information has been saved, application continues to Main menu)

When application is started for the first time:

1. Register with **email** and create **password**
2. **Log in**

Already registered user:

1. Input your **email** and **password**
2. Press **Log in**

3.2 Main menu

Pain targeting: Target pain areas to human model. Create pain areas, related swelling and numbness areas, and assess the level of the pain.

Pain assessment: Input specifying information about created pain areas.

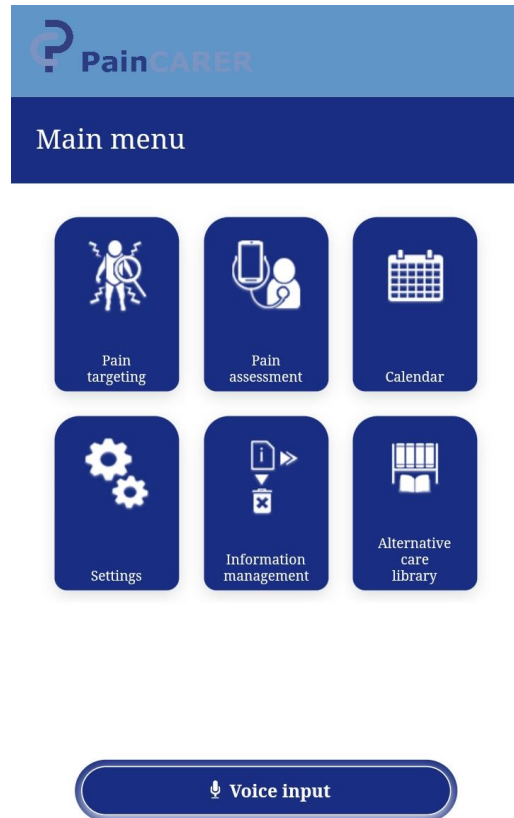
Calendar: Observe your pain history on monthly calendar view or weekly diagram view.

Information management: Remove data and create reports.

Settings: Includes all settings of application and user profile.

Alternative care library: Classified lists of selected alternative drug free treatments and their providers.

Voice input: Record your pain event with voice recording function.



3.3 Pain targeting

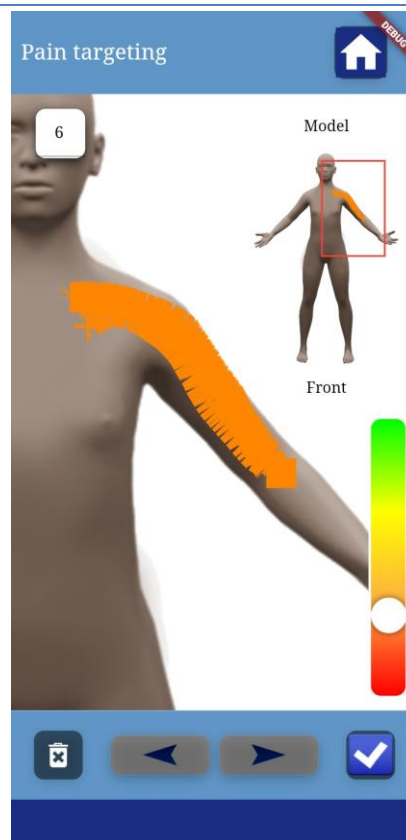
3.3.1 Human model

Human model in targeting view is presenting the patient in the app. Pain area targeting is done by painting the area on the model.

Red rectangle at right top corner of the model visualizes the visible area on the model.

3.3.2 Rotating model

Model can be rotated by pressing the arrow buttons on bottom of the screen. Model can be viewed from four different perspectives (front, left, back and right).



3.3.3 Creating a pain area

Start creating of a pain area by targeting the pain and zooming the model if necessary.

Moving of the model is done by moving one finger on the screen. Zooming in and out is done by two finger pinching/spreading movement.

You can start pain targeting by pressing **Create pain area** button.

Paint the pain area on the model with your finger.

Define the pain level for targeted pain area by using pain level slider (VAS) or numeric pain level (NRS 1-10). Changing pain level changes also color of the pain area.

Accept the drawn pain area by pressing **Accept** button.

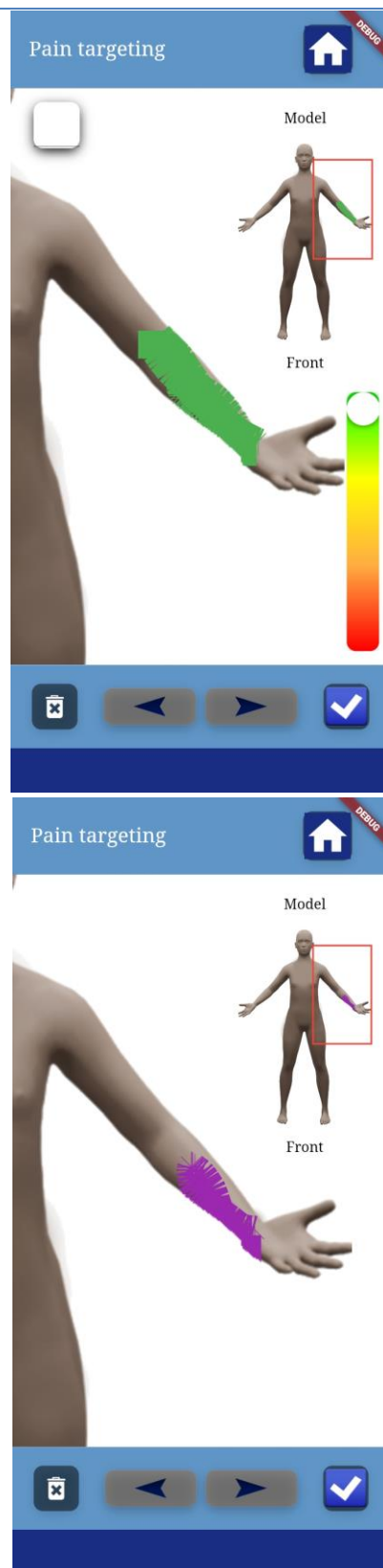
If you want to change or discard created area, press Discard button, which will remove painted area and you can restart the drawing.

3.3.4 Creating a swelling area

After creation of pain area, a popup window appears asking, if there is swelling related to pain area.

If **No** is selected, app will continue to next step (3.3.5 Creating a numbness area).

If **Yes** is selected, area of swelling can be painted on the model with same principle than in pain area creation. (3.3.3).



3.3.5 Creating a numbness area

Next the app will ask in popup window if there is numbness related to pain area.

If **No** is selected, app will continue to next step (3.3.6 Finalizing the pain area).

If **Yes** is selected, area of swelling can be painted on the model with same principle than in pain area creation. (3.3.3).

3.3.6 Saving the pain area

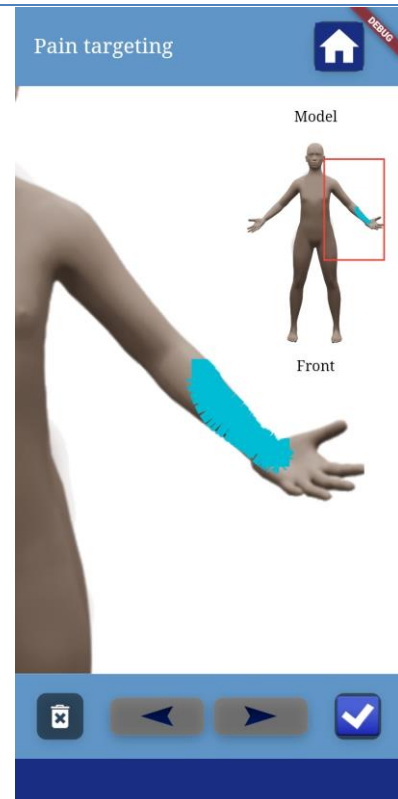
Pain area is saved by pressing Save button. Popup window asks confirmation for saving from the user.

When selecting **Yes**, application saves the created pain area with time stamp.

After saving popup window asks if user wants to continue to pain assessment and input additional information about the pain event.

3.3.7 Saved pain area

If user does not want to continue to pain assessment after saving the pain area, application will return to beginning view of the pain targeting. User is then able to create new pain area. Previous created area is visible in mini model top right corner. Counter in top bar indicates the number of created pain areas.



3.4 Pain assessment

In Pain assessment user can include additional specifying information to created pain areas. All created pain areas are accessible from drop down list on top left corner.

User can make changes to pain assessment and, save and discard made changes.

Pain state: Is the pain chronic or acute?

Pain type: Describe your pain type by selecting the most descriptive icon(s) from the list.

Rest of the pain assessment is done by writing descriptions about the pain symptoms to the text boxes.

Change in condition – Describe how the pain has changed since the last visit at the doctor.

Pain symptoms – Describe more in detail about the pain symptoms.

Pain relief – Describe what factors relieve the pain.

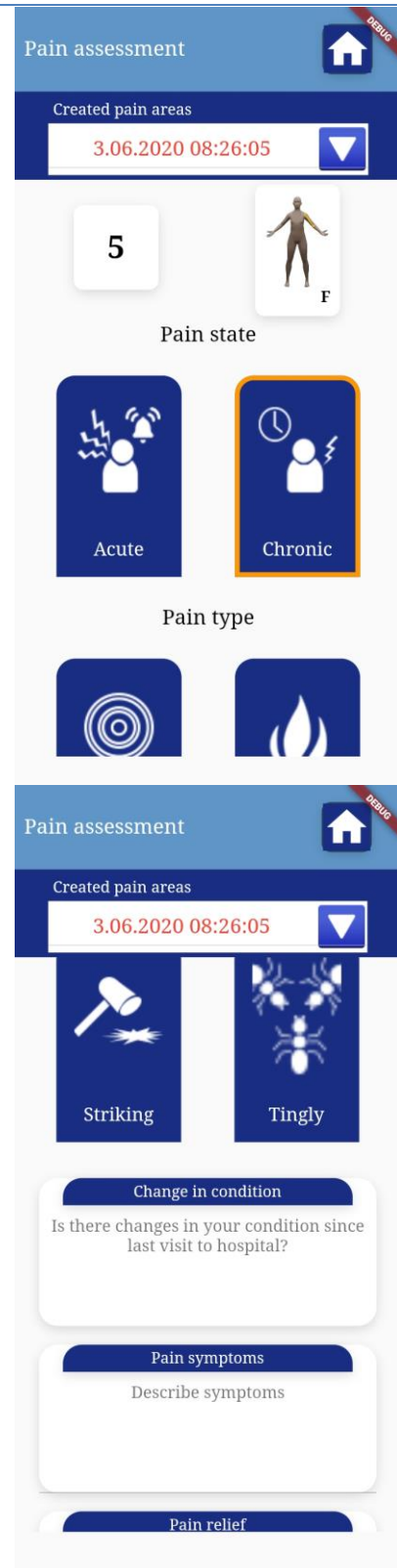
Pain aggravation – Describe what factors aggravate the pain.

3.4.1 Changing the pain area

Assessed pain area can be changed from drop down list at the top. List includes all created pain areas.

After selecting the pain area to be assessed a popup window asks if you want to continue to assessment of selected pain area.

After that another popup window asks user if the made changes to present pain area will be saved before changing the assessed pain area.



The screenshot shows the 'Pain assessment' app interface. At the top, there is a header with a home icon and a 'debug' label. Below the header, a 'Created pain areas' section shows a dropdown menu with the selected item '3.06.2020 08:26:05'. The main assessment area is divided into several sections:

- Pain state:** A card with the number '5' and a human figure icon labeled 'F'.
- Pain type:** Two cards: 'Acute' (with a lightning bolt icon) and 'Chronic' (with a clock icon).
- Change in condition:** A card with a target icon.
- Pain symptoms:** A card with a flame icon.
- Pain relief:** A card with a hammer icon labeled 'Striking' and a card with an insect icon labeled 'Tingly'.

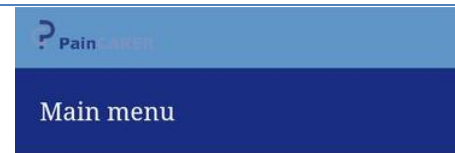
Below the assessment cards, there are three text input fields with blue headers: 'Change in condition' (with the question 'Is there changes in your condition since last visit to hospital?'), 'Pain symptoms' (with the prompt 'Describe symptoms'), and 'Pain relief'.

3.5 Voice recording

Pain event recording can be done also with voice recording. You can make targeting and assessing of the pain event based on your voice record.

Start voice recording by pressing 'Voice recording'-button at main menu view.

Recording is on until 'Voice recording' button is pressed again. After second pressing, voice record is saved, and you can play it from Weekly view of the Calendar.



3.6 Calendar

All pain event records are visible at Calendar view for pain level history view.

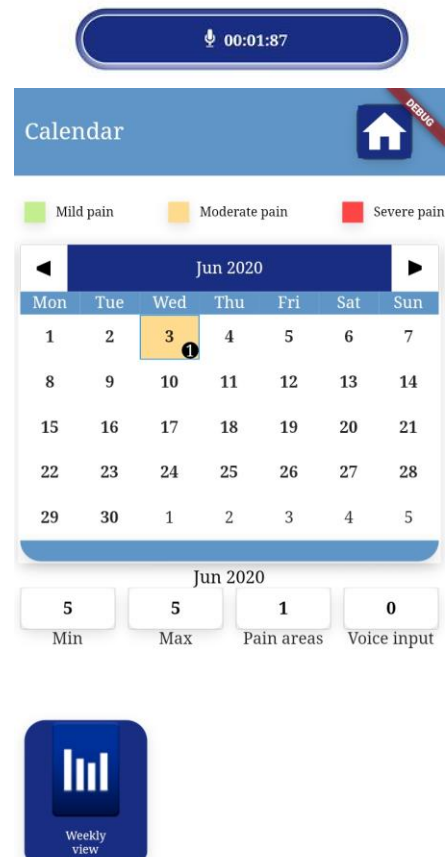
Selected day is marked with blue rectangle around the date.

Days that have pain event recordings are colored according to the maximum pain level of that day's pain records:

- Mild pain = Green
- Medium pain = Yellow
- Severe pain = Red

Amount of daily pain records is visible in the bottom right corner of the day.

Key values of the selected day are visible under the calendar.

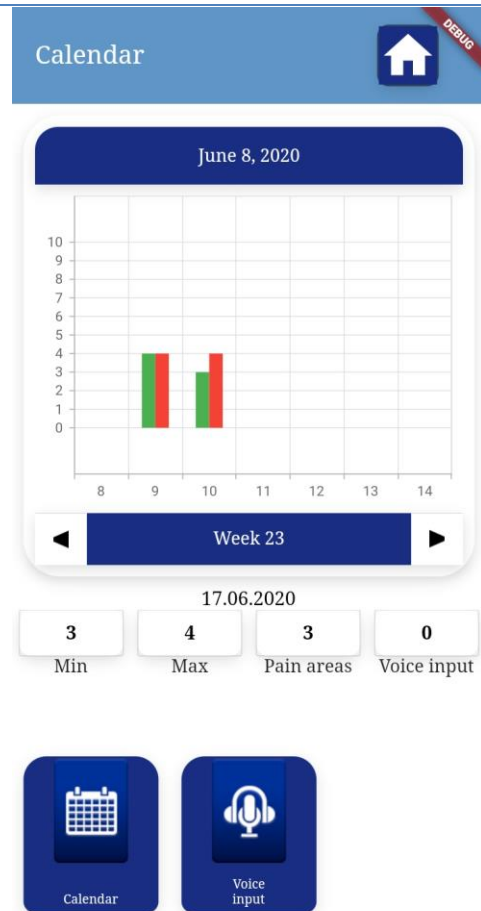


3.6.1 Weekly view

Weekly view can be selected from bottom line of the calendar view.

Weekly view presents diagram view of pain events at the selected week. Diagram shows highest daily pain level with red beam and lowest with green beam.

By selecting Voice records button from bottom of the screen you can see and listen all voice records of selected week.



3.7 Information management

From this view user can manage all recorded pain events. User can delete information or create PDF report of selected pain events and share them with health care professionals.

First, user must select desired time window to observe. All pain events from that time period will be visible in list view sorted by the date.

Each visible pain record has selection box on the left and eye icon on the right end of the bar.

3.7.1 Eye icon

By pressing eye icon, user can observe detailed information about the pain event in text format.

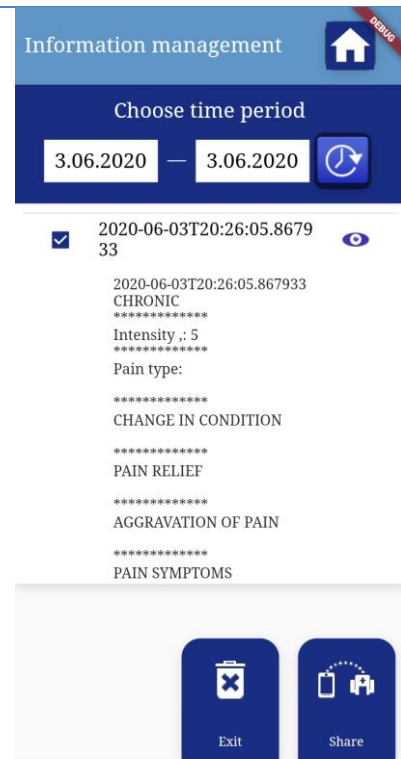
3.7.2 Delete selected

Select all pain records you want to delete by checking the selection box of the record.

User can select all records from observed time window by pressing select all. By pressing it again check boxes will be cleared.

Every line with selection symbol on check box will be deleted when user presses Delete selected button.

Popup window will appear and confirm deleting action from the user.



3.7.3 Create report

User can create .pdf form report of selected pain records and share it with healthcare professional with desirable sharing function.

Select wanted information for the report by selecting the check box from records.

Create report by pressing Create report button.

Application will open preview of the PDF report file. File is saved by closing the preview.

Sharing function will open after closing the preview. User can now share report to healthcare professional by desired sharing feature. We recommend using secured email for sharing the report.

3.8 Settings

Profile – Edit name, age, and gender (Age and gender effect on model visible in pain targeting view).

Kipuwex device settings – Connection and settings of Kipuwex device.

Notifications – User can set notifications for taking medicine, healthy activities etc.

Language – Change language of the application

Notebook – User can write notes about the daily events

Resetting the app information – App will be reset to the stage before first use of the application

Exit – Exit settings

3.9 Alternative care library

Drug-free alternative treatments for pain alleviation are roughly divided to seven categories:

1. Interaction, meeting, and patient education
2. Emotional control and relaxation
3. Music and reasonable activities
4. Physical methods and positioning
5. Peer support
6. Healthy lifestyle
7. eHealth

In default view treatments and services are divided in categories. User can change view to show all treatments in alphabetically sorted list view.

All treatment providers are registered health care professionals.

By pressing treatment category user can read a short description how these treatments effect on pain. More detailed information is available by selecting show more (or info button).

By pressing treatment provider user can see treatment provider information and short description of the treatments.

Alternative care library



DEBUG



Interaction,
meeting
and
patient



Emotional
regulation
and
relaxation



Music
and
reasonable
activities



Physical
methods
and
positioning



Peer_support



Healthy
lifestyle

4 Divergent situations

If application 'freezes' and stops responding:

1. Close and restart the application.
or
2. Reset the app
or
3. Go to PainCARER web site (www.paincarer.com) and ask for help.

If PainCARER application does not start:

1. Clear cache of your device
2. Try to restart the application.
or
3. Delete and re-install the app
or
4. If the app does not start after previous actions, go to PainCARER web site (www.paincarer.com) and ask for help.